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“Tree Loss Concerns Residents”

An unusual number of shade and ornamental trees are dying and residents are understandably concerned. Questions about the cause, and requests for treatment are pouring into the Extension office.

To my knowledge, there is no tree disease epidemic going around. Most trees that I have examined are dying as a result of unintentional damage to the root systems combined with weather patterns over the past 3 years.

By unintentional root damage, I mean any practice that places an established native tree under unnatural stress. Most tree roots are shallow, with the majority being within 12 inches of the soil surface. Also, they are far reaching, with an average spread of 3 times the branch spread. Therefore, any excessive grading, filling, ditching or soil compaction within the area of the root zone limits the roots' ability to function and places trees under stress.

A tree growing under natural forest conditions enjoys a near perfect balance between the portion above ground and the root system. It is a condition of supply and demand: There are enough roots to take up water and minerals and supply them to trunk, branches and leaves, while there is just enough foliage to photosynthesize and send manufactured sugars back to the root system.

Any practice that reduces the amount of roots of a tree results in the loss of a corresponding amount of the top portion. In addition, this root loss can also weaken the tree and make it more susceptible to diseases, insects and other environmental stresses.

The most frustrating thing about this kind of injury is that symptoms usually show up a long time after the damage is done. Depending upon the size and health of the tree, severe symptoms might become evident as early as 1 year after the fact or even 5

to 10 years later, in the case of large live oaks.

This long interval between the time of actual root damage and the above ground symptoms that result is because of a tree's great ability to store food reserves in the trunk and branches. Once a "root to shoot" imbalance occurs, the tree taps into its food reserves, and can look healthy for several months, or even years, even though it might be depleting all of its energy. Death of a tree suffering this condition often appears suddenly, and during the hottest, driest time of the year.

Three years of drought combined with urban trees already under stress has resulted in what we are now seeing. Marginal trees, or those in poor health are being eliminated. This is probably the way that things work under natural forest conditions, but it's a difficult concept to accept in our home landscapes.

Anyone who plans to develop property should apply the harsh lesson that we are now learning. You can't be too careful when protecting desirable trees during development.

An increase in grade of over a few inches can smother roots. A grade cut of only a few inches can remove most shallow feeder roots. A ditch dug beside a tree can destroy up to half of the root system. Even the removal of natural leaf litter can do great damage. I remember a case where an entire stand of live oaks was killed because all of the leaf litter, including the "leaf mold" was raked down to bare soil for the establishment of a lawn.

Here, feeder roots from the oaks was located within the layer of decomposed leaves just below the surface. When the soil was laid bare, these small, fibrous roots quickly overheated, dried out and a couple of years later the trees were dead.

Note: Anyone with further questions concerning sick or dying trees should consult with a licensed tree care professional, urban forester or the local Extension agent. In some cases, treatment might be advised.

There is no magic cure for trees that are suffering from root loss and drought. The return of normal rainfall patterns and amounts will provide the greatest benefit. Continue to provide general maintenance to the landscape. Water and fertilizer supplied for the lawn, shrub and flower plantings will benefit

trees in the area to some extent.

Question of the Week: Scales have infested my variegated privet and burfordi holly. Is it too late to apply an oil spray for control?

Answer: It is too hot to apply most horticultural oil sprays. There is a more highly refined oil on the market now that can be used during the summer. Look for one that is generically labeled as ultra-fine or super fine spray oil and read the label before the purchase. One brand in particular, has been tested at 95 degrees F., with no evident plant damage.